

CMPD2003	CMPD2004
CMPD2003A	CMPD2004A
CMPD2003C	CMPD2004C
CMPD2003S	CMPD2004S

**SURFACE MOUNT
HIGH VOLTAGE
SILICON SWITCHING DIODE**



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DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMPD2003, CMPD2003A, CMPD2003C, CMPD2003S, CMPD2004, CMPD2004A, CMPD2004C and CMPD2004S types are silicon switching diodes manufactured by the epitaxial planar process, designed for applications requiring high voltage capability.



SOT-23 CASE

The following configurations are available:

CMPD2003	SINGLE
CMPD2003A	DUAL, COMMON ANODE
CMPD2003C	DUAL, COMMON CATHODE
CMPD2003S	DUAL, IN SERIES
CMPD2004	SINGLE
CMPD2004A	DUAL, COMMON ANODE
CMPD2004C	DUAL, COMMON CATHODE
CMPD2004S	DUAL, IN SERIES

MARKING CODE: A82
MARKING CODE: 8A2
MARKING CODE: C3C
MARKING CODE: C3S
MARKING CODE: D53
MARKING CODE: DB8
MARKING CODE: DB7
MARKING CODE: DB6

MAXIMUM RATINGS: ($T_A=25^\circ\text{C}$)

Continuous Reverse Voltage
Peak Repetitive Reverse Voltage
Average Forward Current
Continuous Forward Current
Peak Repetitive Forward Current
Peak Forward Surge Current, $t_p=1.0\mu\text{s}$
Peak Forward Surge Current, $t_p=1.0\text{s}$
Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance

SYMBOL	CMPD2003	CMPD2004	UNITS
	CMPD2003A	CMPD2004A	
	CMPD2003C	CMPD2004C	
	CMPD2003S	CMPD2004S	
V_R	200	240	V
V_{RRM}	250	300	V
I_O	200	200	mA
I_F	250	225	mA
I_{FRM}		625	mA
I_{FSM}		4.0	A
I_{FSM}		1.0	A
P_D		350	mW
T_J, T_{stg}		-65 to +150	$^\circ\text{C}$
θ_{JA}		357	$^\circ\text{C/W}$

CMPD2003 CMPD2004
 CMPD2003A CMPD2004A
 CMPD2003C CMPD2004C
 CMPD2003S CMPD2004S

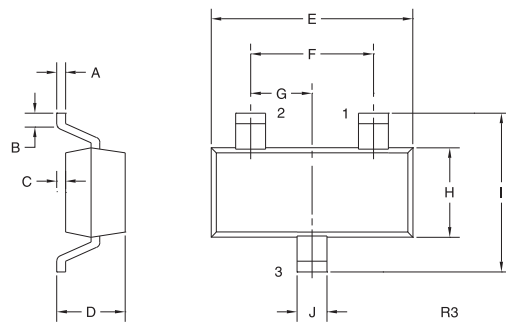


**SURFACE MOUNT
 HIGH VOLTAGE
 SILICON SWITCHING DIODE**

ELECTRICAL CHARACTERISTICS PER DIODE: ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	CMPD2003		CMPD2004		UNITS
		MIN	MAX	MIN	MAX	
I_R	$V_R=200\text{V}$	-	100	-	-	nA
I_R	$V_R=200\text{V}, T_A=150^{\circ}\text{C}$	-	100	-	-	μA
I_R	$V_R=240\text{V}$	-	-	-	100	nA
I_R	$V_R=240\text{V}, T_A=150^{\circ}\text{C}$	-	-	-	100	μA
BV_R	$I_R=100\mu\text{A}$	250	-	300	-	V
V_F	$I_F=100\text{mA}$	-	1.0	-	1.0	V
V_F	$I_F=200\text{mA}$	-	1.25	-	-	V
C_T	$V_R=0, f=1.0\text{MHz}$	-	5.0	-	5.0	pF
t_{rr}	$I_R=I_F=30\text{mA}, R_L=100\Omega, \text{Rec. to } 3.0\text{mA}$	-	50	-	50	ns

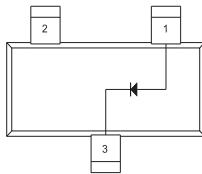
SOT-23 CASE - MECHANICAL OUTLINE



SYMBOL	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.003	0.007	0.08	0.18
B	0.006	-	0.15	-
C	-	0.005	-	0.13
D	0.035	0.043	0.89	1.09
E	0.110	0.120	2.80	3.05
F	0.075		1.90	
G	0.037		0.95	
H	0.047	0.055	1.19	1.40
I	0.083	0.098	2.10	2.49
J	0.014	0.020	0.35	0.50

SOT-23 (REV: R3)

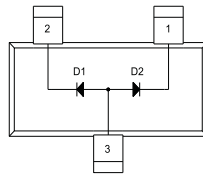
PIN CONFIGURATIONS



**CMPD2003
 CMPD2004**

LEAD CODE:

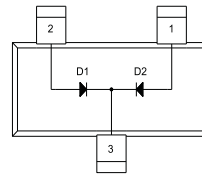
- 1) Anode
- 2) No Connection
- 3) Cathode



**CMPD2003A
 CMPD2004A**

LEAD CODE:

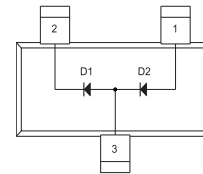
- 1) Cathode D2
- 2) Cathode D1
- 3) Anode D1, D2



**CMPD2003C
 CMPD2004C**

LEAD CODE:

- 1) Anode D2
- 2) Anode D1
- 3) Cathode D1, D2



**CMPD2003S
 CMPD2004S**

LEAD CODE:

- 1) Anode D2
- 2) Cathode D1
- 3) Anode D1, Cathode D2

MARKING CODE: SEE PREVIOUS PAGE

R9 (25-January 2010)

OUTSTANDING SUPPORT AND SUPERIOR SERVICES



PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

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[BK](#) [CMPD2003C TR](#)